

Application. No. 09/593,761  
Amdt. dated September 29, 2003  
Reply to Office Action of March 28, 2003  
Docket No. 8001-1133

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions,  
and listings, of claims in the application:

LISTING OF CLAIMS:

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1. (original) A wavelength-division multiplexed optical transmission system for transmitting an optical signal using frames via an optical fiber transmitting line, comprising a device for reducing mutual interference among a plurality of wavelength channels which are transmitted through a same optical fiber transmitting line.

2. (original) A system according to claim 1, further comprising:

a transmitter for converting an inputted electric signal into the optical signal and transmitting the optical signal;

a receiver for receiving said transmitted optical signal.

3. (original) A system according to claim 2, further comprising any one of:

a unit for mutually differing transmitting frame phases between at least two or more wavelength channels among a plurality of wavelength channels which are transmitted through a same optical fiber transmitting line;

a unit for inserting mutually differing dummy data patterns which are different each other among the wavelength channels; and

a unit for scrambling said electric signals with mutually different scrambling patterns.

4. (original) A system according to claim 2, further comprising a frame phase updating unit for mutually differing transmitting frame phases between at least two or more wavelength channels among a plurality of wavelength channels which are transmitted through a same optical fiber transmitting line.

5. (original) A system according to claim 4, further comprising a frame configuration unit for configuring frames of wavelength channels from a signal to be transmitted to said optical fiber transmitting line and selecting an output signal frame phase itself at random.

6. (original) A system according to claim 5, wherein said frame phase updating unit comprises:

a phase shifter for shifting a phase by a phase delay quantity which is set on the basis of a reference frame phase that is inputted externally; and

a frame phase updating circuit for setting the phase shifted by said phase shifter to an output signal frame phase itself, and wherein

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said phase shifter presets it to cause said phase delay quantity to mutually differ the transmitting frame phases of a wavelength channel group which is transmitted through said same optical fiber transmitting line.

7. (original) A system according to claim 6, further comprising a controller for monitoring and setting the transmitting frame phases of the wavelength channels, wherein

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said controller sets the frame phase of a device for configuring the frames of said wavelength channels so as to mutually differ the transmitting frame phases among the wavelength channel group which is transmitted through said same optical fiber transmitting line.

8. (original) A system according to claim 7, wherein said wavelength-division multiplexed optical transmission system sets a delay quantity of the transmitting frame phases of the wavelength channels corresponding to the control information.

9-13. (cancelled)

14. (original) A wavelength-division multiplexed optical transmission system for transmitting an optical signal via an optical fiber transmitting line, comprising a dummy data generating circuit for <sup>generating</sup> mutually differing dummy data patterns between at least two or more wavelength channels among a wavelength channel group which is transmitted through a same

optical fiber transmitting line, when said wavelength-division multiplexed optical transmission system transmits dummy data.]

15. (original) A system according to claim 14, said dummy data generating circuit further comprising a circuit for using a pattern which is different each other by depending on a transmitter and selected at random as an invalid data pattern.

16. (original) A system according to claim 15, said dummy data generating circuit further comprising a circuit for presetting it to mutually differ dummy data patterns by depending on transmitters.

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17. (original) A system according to claim 16, further comprising a controller for monitoring and setting an invalid data pattern of the wavelength channels, wherein said controller has means for setting a dummy data pattern of transmitters so as to mutually differ the invalid data patterns among the wavelength channel group which is transmitted through said same optical fiber transmitting line.

18. (new) The system according to claim 2, further comprising a device generating different transmitting frame phase of channels if at least two wavelength channels among a plurality of wavelength channels have the same phases.

19. (new) The system according to claim 2, further comprising a device generating random transmitting frame phase of

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